

AQA Biology

GCSE Student Checklist

B18 Biodiversity and ecosystems

Name Class Date

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
B18.1 The human population explosion	I can state what biodiversity means.	<input type="checkbox"/>	I can describe why a good level of biodiversity is important to the future of the human species.	<input type="checkbox"/>	I can explain in detail why a high level of biodiversity is important to the stability of ecosystems.	<input type="checkbox"/>
	I can list some resources that humans are using up.	<input type="checkbox"/>	I can describe some effects of human population growth.	<input type="checkbox"/>	I can explain why human population change differs from population change of other animals.	<input type="checkbox"/>
	I can state some ways that air, water and land is polluted.	<input type="checkbox"/>	I can analyse and interpret data and information concerning human population growth.	<input type="checkbox"/>	I can suggest and evaluate solutions to the problems caused by human population growth.	<input type="checkbox"/>
B18.2 Land and water pollution	I can state some substances that pollute the water and land.	<input type="checkbox"/>	I can describe how sewage, fertilisers, pesticides and herbicides pollute the land and water.	<input type="checkbox"/>	I can explain in detail how pollution affects biodiversity.	<input type="checkbox"/>
	I can state some effects of rubbish, pesticides and sewage on land and water.	<input type="checkbox"/>	I can describe the process of eutrophication and bioaccumulation.	<input type="checkbox"/>	I can explain how pesticides in water can kill top predators in food chains.	<input type="checkbox"/>
	I can display data appropriately with guidance.	<input type="checkbox"/>	I can draw conclusions from data.	<input type="checkbox"/>	I can consider a land or water-based pollution issue, stating opinions with reasoning.	<input type="checkbox"/>
B18.3 Air pollution	I can state that acid rain is caused as a result of burning some fuels.	<input type="checkbox"/>	I can describe how acid rain is formed.	<input type="checkbox"/>	I can use word and symbol equations to show how burning some fuels produces acidic gases.	<input type="checkbox"/>
	I can list some effects of acid rain on plants and animals.	<input type="checkbox"/>	I can plan an investigation to find out how acid rain affects the germination of seeds.	<input type="checkbox"/>	I can explain what causes global dimming and smog and describe their effects.	<input type="checkbox"/>
	I can analyse observations and data with guidance.	<input type="checkbox"/>	I can choose a suitable method for analysing data.	<input type="checkbox"/>	I can analyse in detail data showing sulphur emissions over the last 3 years and suggest reasons for the trend.	<input type="checkbox"/>

Name Class Date

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
B18.4 Deforestation and peat destruction	I can define deforestation.	<input type="checkbox"/>	I can explain the effects of deforestation and peat removal.	<input type="checkbox"/>	I can explain in detail how deforestation and peat removal increases the amount of carbon dioxide in the air.	<input type="checkbox"/>
	I can state at least one reason for deforestation and one effect.	<input type="checkbox"/>	I can categorise reasons for and effects of deforestation as environmental, social, economic and/or political.	<input type="checkbox"/>	I can analyse data to describe a trend in deforestation rate and give an explanation.	<input type="checkbox"/>
	I can give a use for peat.	<input type="checkbox"/>	I can describe why there is a conflict between using peat to increase food production and the need to conserve peat bogs.	<input type="checkbox"/>	I can explain the conflict between using peat to increase food production and the need to conserve peat bogs.	<input type="checkbox"/>
B18.5 Global warming	I can state that global warming is caused by increased levels of carbon dioxide and methane in the atmosphere.	<input type="checkbox"/>	I can use the terms greenhouse effect, global warming and climate change correctly.	<input type="checkbox"/>	I can produce scale diagrams showing some of the contributors to the greenhouse effect.	<input type="checkbox"/>
	I can give one biological consequence of global warming.	<input type="checkbox"/>	I can describe in detail the biological consequences of global warming.	<input type="checkbox"/>	I can explain in detail the causes and effects of rising carbon dioxide and methane levels in the atmosphere.	<input type="checkbox"/>
B18.6 The impact of change		<input type="checkbox"/>	I can state some examples of environmental changes that affect the distribution of species in an ecosystem.	<input type="checkbox"/>	I can categorise environmental changes as due to seasonal changes, geographical changes, human interaction or a combination.	<input type="checkbox"/>
		<input type="checkbox"/>	I can explain how humans can cause environmental changes.	<input type="checkbox"/>	I can explain how people are attempting to reduce the problems caused by a change in distribution of organisms.	<input type="checkbox"/>
		<input type="checkbox"/>	I can describe an example of how environmental change has affected the distribution of species.	<input type="checkbox"/>	I can predict and explain how an environmental change will affect the distribution of an organism.	<input type="checkbox"/>

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B18.7 Maintaining biodiversity	I can list some ways in which people can help maintain biodiversity.	<input type="checkbox"/>	I can describe programmes to reduce negative effects on ecosystems and explain how they work.	<input type="checkbox"/>	I can evaluate the conflicting pressures on maintaining biodiversity in some habitats.	<input type="checkbox"/>
	I can state reasons why some habits are at risk.	<input type="checkbox"/>	I can use information to explain the conflicting pressures on maintaining biodiversity.	<input type="checkbox"/>	I can link ideas to suggest why recycling can help protect habitats.	<input type="checkbox"/>
B18.8 Trophic levels and biomass	I can identify a producer, primary consumer and secondary consumer from a food chain and pyramid of biomass.	<input type="checkbox"/>	I can number the trophic levels on a food chain, food web and pyramid of biomass.	<input type="checkbox"/>	I can explain why pyramids of biomass are always pyramid shaped.	<input type="checkbox"/>
	I can identify organisms using a chart and group organisms into feeding types.	<input type="checkbox"/>	I can describe how decomposers feed.	<input type="checkbox"/>	I can evaluate a method for collecting information about biomass.	<input type="checkbox"/>
	I can draw a pyramid of biomass with guidance.	<input type="checkbox"/>	I can use data to draw a pyramid of biomass and explain what it shows.	<input type="checkbox"/>	I can calculate the percentage of biomass passed between trophic levels.	<input type="checkbox"/>
B18.9 Biomass transfers	I can state the energy transfer that occurs during photosynthesis.	<input type="checkbox"/>	I can calculate the percentage of biomass passed between trophic levels.	<input type="checkbox"/>	I can calculate the efficiency of energy transfers.	<input type="checkbox"/>
	I can calculate the percentage of biomass passed between trophic levels with guidance.	<input type="checkbox"/>	I can calculate the efficiency of transfers with guidance.	<input type="checkbox"/>	I can explain in detail the reasons why not all biomass is passed from one trophic level to the next.	<input type="checkbox"/>
	I can give a reason why not all biomass is passed from one trophic level to the next.	<input type="checkbox"/>	I can explain how the loss of biomass at each trophic level affects the number of organisms at each level.	<input type="checkbox"/>	I can link the reduction in biomass to energy transfers and evaluate a model used to represent this.	<input type="checkbox"/>

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B18.10 Factors affecting food security	I can state what food security and malnutrition mean.	<input type="checkbox"/>	I can define sustainable food production and describe how it could help increase food security.	<input type="checkbox"/>	I can suggest and explain how events could affect food security.	<input type="checkbox"/>
	I can list some factors that reduce food security.	<input type="checkbox"/>	I can explain how factors affect food security.	<input type="checkbox"/>	I can consider if malnutrition is just a problem in developing countries.	<input type="checkbox"/>
	I can present information in a debate.	<input type="checkbox"/>	I can present information based on research.	<input type="checkbox"/>	I can present information clearly with supporting evidence.	<input type="checkbox"/>
B18.11 Making food production efficient	I can describe the difference between free-range and 'factory farming' of chickens.	<input type="checkbox"/>	I can explain why there could be more food for everyone if we ate less meat.	<input type="checkbox"/>	I can use viewpoints from a range of people during a debate on farming.	<input type="checkbox"/>
	I can list some advantages and disadvantages of both methods.	<input type="checkbox"/>	I can explain why there are ethical objections to some 'factory farming' techniques.	<input type="checkbox"/>	I can explain in detail why, in terms of food production efficiency, it is a good idea to reduce meat in the diet or replace it with insects.	<input type="checkbox"/>
		<input type="checkbox"/>	I can explain how 'factory farming' techniques increase rate of growth.	<input type="checkbox"/>		<input type="checkbox"/>
B18.12 Sustainable food production	I can give one reason why fish stocks in the ocean are decreasing.	<input type="checkbox"/>	I can describe the reasons why fish stocks in the ocean are decreasing.	<input type="checkbox"/>	I can explain the negative impacts of fishing restrictions on communities.	<input type="checkbox"/>
	I can describe one reason why a reduction in fish stocks is a problem.	<input type="checkbox"/>	I can describe the techniques used to conserve fish stocks.	<input type="checkbox"/>	I can compare and contrast the production of mycoprotein with intensive farming.	<input type="checkbox"/>
	I can state what mycoprotein is.	<input type="checkbox"/>	I can describe how mycoprotein is produced.	<input type="checkbox"/>	I can explain the advantages of eating mycoprotein for the individual and for society as a whole.	<input type="checkbox"/>